There is a lot of information about sustainability on the Internet. Use a search engine to find out more. Following are a few key words to get you started on your search for additional information about sustainability.

- sustainability
- ecosystems
- water conservation
- environmental science
- pollution

Also, be sure to visit the Southwest Florida Water Management District’s web site at WaterMatters.org.

Answers to Sustainability Survey questions on page 5:

All answers should be YES except 2 and 5.

What Does It Mean?

Have you ever heard people talk about sustainability? What do you think it means? Before we begin our discussion on sustainability, let’s take a closer look at the history and meaning of the word. Sustain comes from the Latin word sustineo, which means to hold up or support. Webster’s Dictionary defines sustainability as having the characteristic of being able “to keep up, to carry or withstand,” as in bearing a weight or pressure. Although this may seem like a difficult concept to understand, it is something that affects the entire world.

How can we understand the concept of sustainability?

Let’s consider your home refrigerator as a closed environment. If the contents of the refrigerator are never replaced, in Florida, our growing population and varying amounts of rain mean that the need to conserve is very important.

The WaterWeb Query

QUESTION:

If the earth still has the same amount of water since the beginning of time, why are we worried about running out of water?

ANSWER:

About three-fourths of the earth is covered with water. Approximately 97 percent is salt water and 3 percent is fresh water frozen in ice caps, leaving only 1 percent that is drinkable. We must have enough water when and where we need it. In many parts of the world, people are using water faster than it can be replaced. In Florida, our growing population and varying amounts of rain mean that the need to conserve is very important.

Here are three ways you can help:

- Take shorter showers.
- Turn the water off when you’re brushing your teeth.
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Can you add to the list?
Steps to Sustainability

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Where Our Water Comes From

The average rainfall in west-central Florida is 53 inches a year, making it one of the rainiest regions in North America. However, most of our rainfall occurs in June through September and much is lost to evaporation. Other water runs off into surface water bodies and a portion of rainfall soaks through the soil into underground aquifers. The region within the SWFWMD obtains about 80 percent of its drinking water from these groundwater supplies and approximately 20 percent from surface water bodies.

In some areas of the SWFWMD, aquifers are connected with the lakes, rivers and wetlands above them. If too much water is withdrawn from the aquifers, the water level of the lake or river above may decline. Excessive groundwater withdrawals could also cause the salt water that surrounds the Florida aquifer system to move or intrude into freshwater areas, which decreases the amount of fresh water available and increases the cost for providing clean, drinkable water to residents.

It’s expected that groundwater will always be a source of drinking water, but access to other sources is essential. The use of surface water will most likely increase in the future because the ability of the groundwater system to satisfy an ever-growing need for fresh water is limited. But there are limits to surface water as well.

The SWFWMD’s Role

The SWFWMD is responsible for managing and protecting water resources and related environmental systems. To protect natural systems that sustain groundwater, there must be limitations on how much water can be withdrawn. This is accomplished through planning, permitting and regulation. Local and regional governments, and agricultural and other users come to the SWFWMD to request water use permits. In addition to protection through regulation, the SWFWMD technically and financially assists regional water supply authorities and local governments in developing new water sources.

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There are several steps that can help create and maintain sustainable water sources.

Conservation – Conservation can be the most cost-effective “new” water source available. A drop of water saved is a drop of water gained.

Reclaimed water – Reclaimed water is defined as “water that has received at least secondary treatment and is reused after flowing out of a wastewater treatment facility.” Reclaimed water is currently used for agricultural irrigation, groundwater recharge, industrial processes and the irrigation of lawns, landscapes, cemeteries and golf courses. Reuse saves fresh water for drinking and other daily needs and relieves the stress on the environment by reducing the demand from ground and surface waters.

Offstream reservoirs – During our rainy season, water can be skimmed from the high flows of rivers and stored for later use in offstream reservoirs.

Desalination – Desalination is a process that removes salt from seawater or from brackish (slightly salty) water to produce fresh, drinking-quality water. The process would allow us to benefit from the vast quantities of water available in the Gulf of Mexico.

Land acquisition – Another key to a sustainable water supply is land acquisition and management. The SWFWMD, other organizations and private citizens could all work together to protect our cemeteries and golf courses. Reuse saves fresh water for drinking and other daily needs.

1. Water is on the topic of _____.
2. There are many ways to practice water _____.
3. Water is one of our most precious _____.
4. We can _____ water by using less of it!
5. A _____ used outdoors should always have a nozzle on it.
6. A time when there is little rain and very dry weather is called a _____.
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8. All living things depend on a clean and healthy water _____.
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WaterWeb Word Scramble

Unscramble the letters to form words. Then unscramble the letters in circles to create a new word below.

Across:
1. Encourage people to save water, not _____ it.
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Crossword Puzzle

Sharpen your pencils. Complete each sentence with the correct word that fits in the puzzle.
Land Use My Way

The concept of sustainable development is very important when we think about the growth of a community. Groups within the community may have different views about future development and its effects on the environment. The purpose of this activity is to gain a better understanding of the complexities of sustainable development. This activity will require three class sessions.

Session One
Use a large piece of paper the size of a wall mural, bulletin board, etc. As a class, draw a stream, wetlands, river and estuary system (see sample drawing). Be creative. Draw plants and animals that could be found there. You may also use cutouts from magazines.

Session Two
Divide into seven groups so each group represents the interests of a different type of water user. From the perspective of your group, develop a plan as to how the water resources in this area should be used.
1. Residents (people who live in the area)
2. Agriculture (farmers)
3. Local business (maybe a mall, insurance or real estate company)
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5. Social services (hospitals or schools)
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7. Manufacturing (fertilizer plant, boat manufacturer or other type of processing plant)

Session Three
Combine all groups for a follow-up discussion. A representative from each group should present the plan. After all positions have been presented, discuss the pros and cons of each plan. Groups with conflicting interests may need to modify their positions based on what is best for the community. As a class, determine the best plan for developing the community. Complete the mural.

What Do You Think?

1. Why is it important to create and maintain sustainable water sources?
2. What are possible consequences of groundwater depletion?
3. How does purchasing and conserving tracts of land help to protect water resources?
Spread the Word, It’s Cool to Conserve!

There are several ways you can help your community save water. Here are just a few things you can do:

Don’t Be a Sunshine Sprinkler!
Avoid watering your lawn in the middle of the day. Instead, water early in the morning according to your local watering restrictions.

Be a Sweeper, Not a Hoser!
Use a broom instead of a hose to clean driveways and sidewalks.

Don’t Be a Lawn Scalper!
Try to keep the grass on your lawn at least 3 to 4 inches high. Raising your lawn mower blade to its highest setting encourages grass roots to grow deeper and grass blades to hold moisture longer than a closely clipped lawn.

Stay in Your Space!
Adjust sprinklers so they water only landscaped areas and not driveways, sidewalks and streets.

Become Florida-Friendly!
Create landscape areas that don’t require a lot of water. Landscape with drought-tolerant ornamental grasses, plants and trees. Group plants together based on similar water needs and use mulch to retain moisture and reduce weeds.

Slow the Flow!
Turn off the water while brushing your teeth or washing your face. Any water you don’t use is just going down the drain.

Delay Your Chores!
Run automatic dishwashers only when fully loaded. Set clothes washers to the appropriate water level for the size of load you are washing.

Save Time and Water!
If you don’t have an automatic timer on your sprinkler, use a kitchen timer as a reminder to turn off the water. Left unattended, a garden hose can waste as much as 540 gallons of water in just an hour.

You have learned that sustaining our water resources is a challenge for all citizens. How involved are your relatives, friends and neighbors in protecting and maintaining our natural resources? Use the survey below and find out. Give copies of the survey to at least five people. Ask them to give honest answers to each of the 10 questions. After they have finished, show them the desirable answers, which are included on page 8. By teaching others about sustainability, you will play an important role in the future of our environment. You may also want to compare your survey results with other classmates. Some of the results may surprise you!

**Sustainability Survey**
For each question, check Yes or No.

<p>| | | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>Yes</td>
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<tr>
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<tr>
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<td>4. Do you use recycling bins for newspapers, plastics, glass, etc.?</td>
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<tr>
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**Media Reprint**

Wetland and upland health play an important role in a sustainable water supply. Wetlands contribute to water supplies, especially in areas that rely on surface waters. Wetlands also help filter out impurities from stormwater runoff and contribute significantly to ecosystem health by providing habitat for fish and wildlife. Uplands are important water resource areas, especially because of their potential to recharge the Floridan aquifer system.

Water is crucial to the quality of life that has attracted so many people to Florida. Demand for water continues to grow. Safe, cost-effective, sustainable and environmentally friendly water sources are needed. If we are to preserve the environment that makes Florida unique, everyone must work together to sustain west-central Florida’s water resources.

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Credits

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Inside this issue

2 Steps to Sustainability
4 Spread the Word. It’s Cool to Conserve!
5 It’s Your Turn
6 Land Use My Way
7 Activities
8 Web Sites

Sustainability

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How can we understand the concept of sustainability?

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Now let’s take a closer look at one of our most precious resources — WATER. The hydrologic cycle cleans and replenishes the earth’s surface water bodies and aquifers. People are using water faster than we can replace it. With impacts caused by the increasing population in west-central Florida, the Southwest Florida Water Management District (SWFWMD) is concerned about the issue of sustainability. The SWFWMD is charged with maintaining the balance between the water needs of current and future users while protecting and maintaining the natural systems that provide the SWFWMD with its existing and future water supply.

As we think about sustainability in the next century, we need to focus on many issues related to our natural resources. People need to work together to balance all aspects of life in Florida, in other states and throughout the world. Each of us plays an important role in meeting the challenges of sustaining our water resources.

Here are three ways you can help:

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